



MEB3

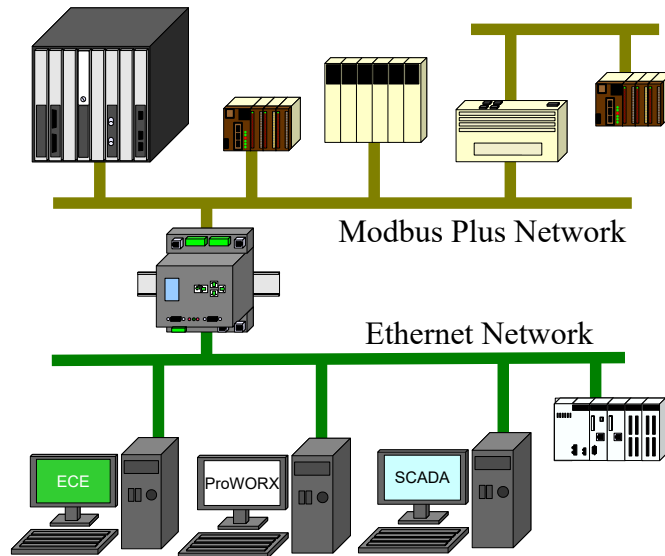
Modbus Plus ↔ Ethernet Bridge



MEB3+201

Overview

Niobrara's MEB3 is an EcoStruxure Control Expert compatible, fully functional, bi-directional Modbus Plus to Ethernet bridge. Devices on either network can access devices on the other network. This network traffic can be I/O and register data or programming commands from ECE or other Modicon compatible programming packages.



The Modbus Plus port provides redundant cable connections and may also be used in standard single cable networks. The MEB3 supports the full five drop MB+ routing allowing full access of downstream Bridge Plus (BP85) and Bridge Mux (BM85) networks.

The Ethernet port supports simultaneous Modbus/TCP client and server operation. A built-in Web server simplifies configuration and troubleshooting.

Two isolated serial ports are included to allow Modbus serial devices (Master or Slave) to be accessed by Modbus Plus and Ethernet. Each serial port supports 18 protocol modes including SY/MAX and PowerLOGIC for integrating legacy hardware.

MB+ Proxy

The MEB3 supports Modbus Plus Proxy operation where incoming MB+ messages routed to the MEB3's node are tunneled across Ethernet to a target PLC such as an M580 or M340. Optional register offsets and opcode changes (1x to 0x and 3x to 4x, etc.) may be configured to allow 0-based PLCs to mimic 1-based older PLCs. The MEB3 still performs its normal Ethernet<>MB+ bridging while in proxy mode so programming software and SCADA may still access the other MB+ nodes via Ethernet.

MB+ Peer Cop

The MEB3 supports MB+ Specific Input and Specific Output Data (Peer Cop) from the target PLC and is controlled by the RUN/STOP status of the target PLC. MB+ Global Data In and Out are also supported.

Niobrara Research & Development Corporation
P.O. Box 3418
Joplin, MO 64803 USA
Tel: +1 417-624-8918
Fax: +1 417-624-8920
niobrara.com

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QUANTUM DIO Racks

The MEB3 (along with some ECE function blocks) allows a M580 to control Quantum Distributed IO Racks. A Windows utility is provided to automatically extract the MB+ configuration from a ECE (Unity) ZEF and build a new ZEF with the new data structures and control functions for controlling Quantum DIO. UMAC is then used to finish the conversion of the application to M580.



Dual Ethernet Networks

The MEB3+201 allows the two Ethernet ports to be configured with independent IP Addresses so Ethernet clients on both networks may access MB+ nodes. E1 supports Web configuration, Modbus/TCP messaging, Proxy mode, I/O Scanner, and SY/MAX 802.3. E2 supports Modbus/TCP messaging and Web configuration. An ACL may be configured to restrict Modbus/TCP and Web operation on either/both ports.

Ordering Information

- MEB3+001** One 100BaseTX Ethernet, Dual Cable MB+, two RS-232/RS-485 serial ports
MEB3+201 Two 100BaseTX Ethernet, Dual Cable MB+, two RS-232/RS-485 serial ports

Specifications



Dimensions	DIN rail mount 4.4" wide by 4.4" tall by 3.5" deep. Approx. 1.2 pounds net
Power Requirements	24VDC 6W – 3 position removable connector is provided
Indicators	Module: LCD with backlight Serial Ports: TX and RX for each port Ethernet: Link/Activity, 10/100 for each port Modbus Plus: Active, Channel A Error, Channel B Error
Ethernet	10/100BaseTX port with RJ45 connector. Modbus/TCP and/or SY/MAX 802.3 protocols. Web server for configuration. MEBII+201 includes second 10/100BaseTX port supporting two independent IP networks.
Modbus Plus	Dual Cable Modbus Plus port with two DB9 female connectors
Serial Ports	Two isolated ports selectable between RS-232 (RJ-45 connector) and RS-485 (5 position removable screw terminal) Independently configurable for baud rate, data bits, parity, stop bits, and protocol. RS-485 port is 2-wire and 4-wire compatible.
Serial Port Modes	Each serial port can independently operate in any of the following modes: Modbus (RTU or ASCII, master or slave), SY/MAX, Net-to-Net, Peripheral, PLOGIC, Multidrop, IDEC, Gateway, Transparent, Share, PNIM, RNIM (master or slave), Transfer, Chevron, Dual Slave.
Operating Conditions	0-50 degrees C operating temperature; -40 to 80 degrees C storage. Humidity up to 90% non-condensing. Pressure altitude -200 to +10,000 feet MSL.
Warranty	The MEB3 carries a one-year warranty from the date of shipment.

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& Development
Corporation
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Joplin, MO 64803 USA
Tel: +1 417-624-8918
Fax: +1 417-624-8920
niobrara.com

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